Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-27. (Cancelled)

28. (Currently Amended) A method of utilizing a triggerably releasable delivery system in the treatment of a patient, the method comprising administering to the patient a plurality of nanoparticles containing silica coated with alumina and having a size of about 500 nanometers or less, wherein ~~the nanoparticles are bonded to~~ the alumina provides a site on a surface of the nanoparticles to which is bonded a functional compound, wherein the nanoparticles possess a zeta potential of about 20 millivolts or more, wherein the functional compound is released from the surface of the nanoparticles upon exposure to an environmental or chemical condition.

29. (Cancelled)

30. (Previously Presented) The method of claim 28, wherein the nanoparticles posses a zeta potential of about 30 millivolts or more.

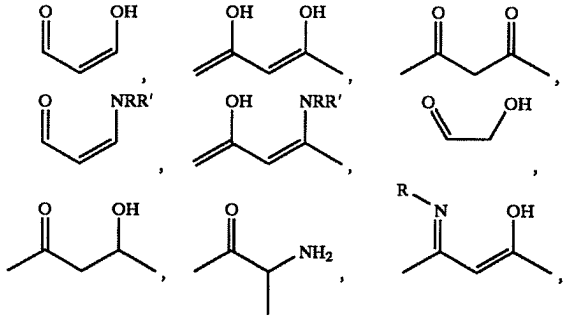
31. (Previously Presented) The method of claim 28, wherein the nanoparticles posses a zeta potential of about 40 millivolts or more.

32. (Cancelled)

33. (Previously Presented) The method of claim 28, wherein the functional compound is an anti-microbial agent, anti-viral agent, or a combination thereof.

34. (Previously Presented) The method of claim 28, wherein the functional compound is a therapeutic agent.

35. (Previously Presented) The method of claim 28, wherein the functional compound contains a moiety comprising:



or a tautomer thereof, or a functional equivalent thereof, wherein R and R' comprise independently hydrogen, an alkyl group, or an aryl group.

36. (Previously Presented) The method of claim 28, wherein the nanoparticles are contained within a vehicle.

37. (Previously Presented) The method of claim 36, wherein the vehicle is a liquid.

38. (Previously Presented) The method of claim 36, wherein the vehicle is a gel.

39. (Previously Presented) The method of claim 36, wherein the vehicle includes a pH altering material.

40. (Previously Presented) The method of claim 28, wherein the nanoparticles are located on a substrate prior to administration to the patient.

41. (Previously Presented) The method of claim 28, wherein the environmental or chemical condition includes a change in pH.

42. (Previously Presented) The method of claim 41, wherein the change in pH involves a change from an acidic to an alkaline pH.

43. (Previously Presented) The method of claim 41, wherein the change in pH involves a change from an alkaline to an acidic pH.

44. (Previously Presented) The method of claim 28, wherein the nanoparticles are topically administered to the skin of the patient.

45. (Previously Presented) The method of claim 28, wherein the nanoparticles are administered to a mucosal membrane of the patient.

46. (Previously Presented) The method of claim 45, wherein the mucosal membrane is located in the vagina of a female.

47. (Currently Amended) A method of utilizing a triggerably releasable delivery system in the treatment of a patient, the method comprising administering a vehicle to a mucosal membrane of a patient, the vehicle comprising a plurality of nanoparticles containing silica coated with alumina and having a size of about 500 nanometers or less, wherein ~~the nanoparticles are bonded to~~ the alumina provides a site on a surface of the nanoparticles to which is bonded a functional compound, wherein the nanoparticles possess a zeta potential of about 20 millivolts or more, and wherein the functional compound is released from the surface of the nanoparticles by a change in pH.

48. (Cancelled)

49. (Previously Presented) The method of claim 47, wherein the nanoparticles posses a zeta potential of about 30 millivolts or more.

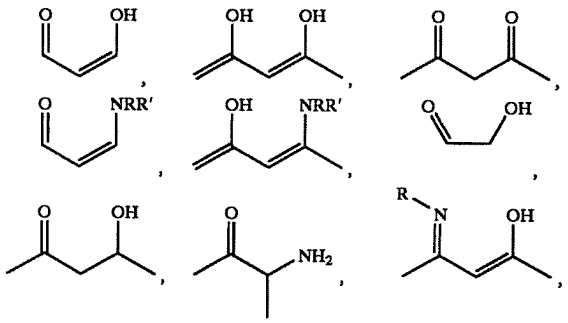
50. (Previously Presented) The method of claim 47, wherein the nanoparticles posses a zeta potential of about 40 millivolts or more.

51. (Cancelled)

52. (Previously Presented) The method of claim 47, wherein the functional compound is an anti-microbial agent, anti-viral agent, or a combination thereof.

53. (Previously Presented) The method of claim 47, wherein the functional compound is a therapeutic agent.

54. (Previously Presented) The method of claim 47, wherein the functional compound contains a moiety comprising:



or a tautomer thereof, or a functional equivalent thereof, wherein R and R' comprise independently hydrogen, an alkyl group, or an aryl group.

55. (Previously Presented) The method of claim 47, wherein the vehicle is a liquid.

56. (Previously Presented) The method of claim 47, wherein the vehicle is a gel.

57. (Previously Presented) The method of claim 47, wherein the vehicle includes a pH altering material.

58. (Previously Presented) The method of claim 47, wherein the nanoparticles are located on substrate prior to administration to the patient.

59. (Previously Presented) The method of claim 47, wherein the change in pH involves a change from an acidic to an alkaline pH.

60. (Previously Presented) The method of claim 47, wherein the change in pH involves a change from an alkaline to an acidic pH.

61. (Previously Presented) The method of claim 47, wherein the mucosal membrane is located in the vagina of a female.